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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/494,278	01/30/2000	Bill J. Pope	6061 P	3224

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EXAMINER

ISABELLA, DAVID J

ART UNIT	PAPER NUMBER
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3738

DATE MAILED: 12/16/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/494,278

Applicant(s)

POPE ET AL

Examiner

DAVID J ISABELLA

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 and 31-67 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-28, 31-55, 64 and 65 is/are allowed.
- 6) ☒ Claim(s) 29, 56-63, 66 and 67 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

Status of the claims

Claims 1-29,31-67 are pending in the application. Claims 1-28 were indicated to be allowable over the art of record.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 56,66 and 67 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Pope, et al (5645601).

Pope, et al discloses a prosthetic joint having first and second members with a fixation portion and a load bearing/articulation portion. The joint includes a volume of diamond on the load bearing/articulation portion. The newly added limitation to the thermal expansion of the PCD and the substrate would inherent be different, since the substrate and the PCD are materially different.

Claims 66 and 67 see column 3.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 29,57-63 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pope, et al (5,645,601) in view of Turchan et al (5,554,415).

Pope, et al discloses a prosthetic joint having first and second members with a fixation portion and a load bearing/articulation portion. The joint includes a volume of diamond on the load bearing/articulation portion. Note, Pope, et al discloses that the polycrystalline materials can be bonded to the substrate according to known methods as seen in prior patents 3745623,3767371,3871840,3841852,3913280,4311490 where it is known to use solvent catalyst in bonding application of the polycrystalline to the substrate. Turchan, et al teaches a method for coating a substrate with PCD via sintering. Additionally, Turchan, et al provides for a transition zone and the feature of a mechanical grip. Pope, et al is silent to specific methods to achieve a PCD coating on a substrate. Pope, et al describes that the PCD layer could be bonded to the joint surfaces by any satisfactory method including different methods for different surfaces. Turchan, et al outlines various known methods to provide for a PCD layer on surgical items including sintering. Moreover, Turchan, et al describes the provision of a gradient between the substrate and the PCD and the use of mechanical grip on the substrate to provide more effective bonding of the PCD (see columns 23 and 24). Pope, et al defines the broad concept of cooperating surfaces of a prosthetic joint being provided with a coating of PCD. This coating provides excellent tribological properties to the prosthesis. Pope, et al fails to disclose specific methods for providing the coating but states that those skilled in the art could use any known methods. Turchan, et al

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provides the specifics to the arrays of methods available to those skilled in the art including sintering. In light of the teachings of Turchan, et al, the joint/coating combination of Pope, et al would have been obvious to one of ordinary skill in the art based upon engineering considerations. The specifics to the chemical bonds, mechanical grip, topographical features, stress field, Ra value, polishing, specific orthopedic structure for bone applications, materials and substrate layers are fully disclosed in the patent to Turchan, et al.

Allowable Subject Matter

Claims 1-28,31-55,64,65 are allowed.

Response to Arguments

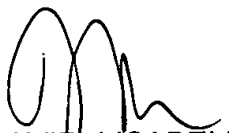
Applicant's claimed for priority has not been perfected. The Inventors of the 5,645,601 patent are Pope and Garrick and the inventors of the current application are Pope, Taylor, Vail and Jensen. Clearly the inventor tree is not consistent. Note, US Patent 6010633 does not name the inventors party to this application.

Therefor, the outstanding rejections to the claims are maintained.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DAVID J ISABELLA whose telephone number is 703-308-3060. The examiner can normally be reached on MONDAY-FRIDAY.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, CORRINE MCDERMOTT can be reached on 703-308-2111. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-3579 for regular communications and 703-305-3580 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0858.



DAVID J ISABELLA
Primary Examiner
Art Unit 3738

dji
December 12, 2003